

**Geometry Test 5 Mr. Holcomb 2008/2009**

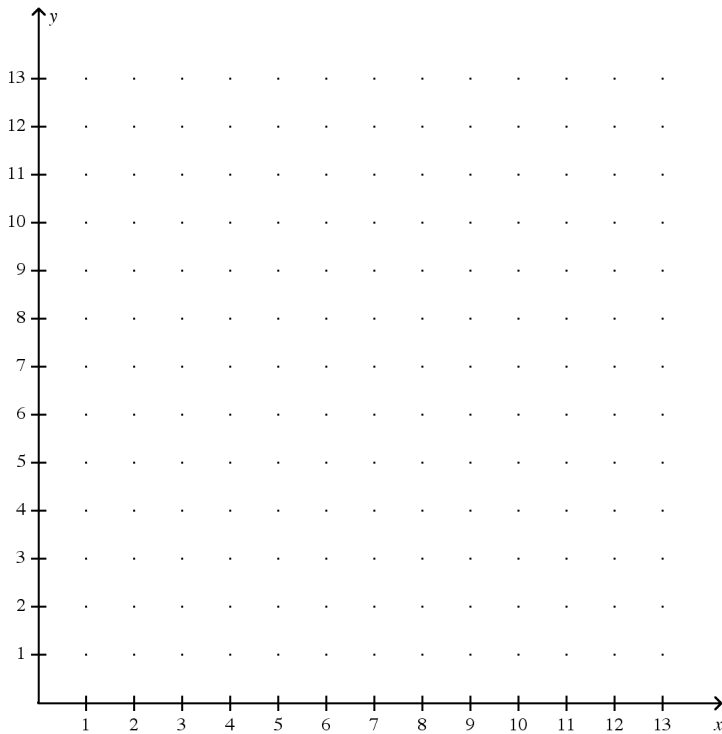
**Best place to get pizza** \_\_\_\_\_

**Problem**

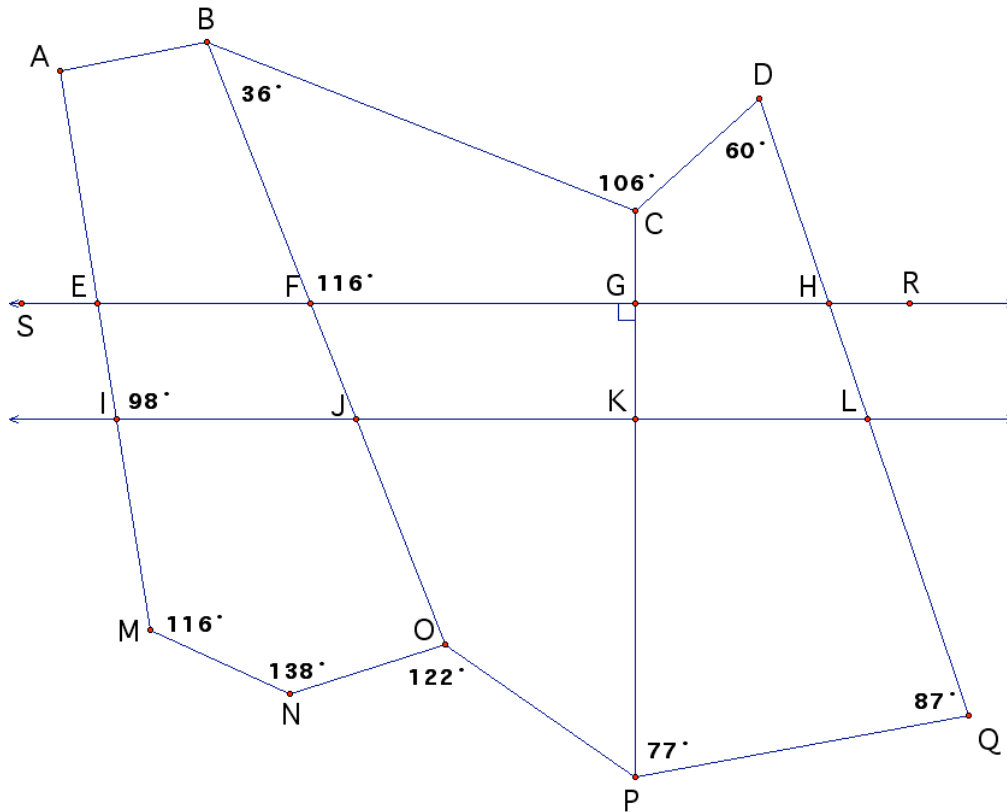
**Model Drawing Problem.**

- 1) Read the problem completely.
- 2) Draw a model. Label the model with the given information. Remember “Recipe Reading”. (6 points)
- 3) Define a base unit. (2 points)
- 4) Place your “?”. (2 points)
- 5) Work your computation. (4 points)
- 6) Write a complete sentence to answer the question. (2 points)

1. (16 points) The  $x$  and  $y$  coordinates of all points in this problem are integers. The  $y$ -value for point  $A$  is twice its  $x$ -value. The sum of point  $A$ 's  $x$  and  $y$ -values is 9. The distance from point  $A$  to the midpoint of  $\overline{AB}$  is  $\sqrt{13}$ . Point  $C$  is located at  $(10,7)$  and  $BC = \sqrt{10}$ . What is the location of point  $B$ ?



2. (26 points) Use the information in the drawing below and the facts that  $m\angle BAE = m\angle ABF$ ,  $\overleftrightarrow{EH} \parallel \overleftrightarrow{JL}$  to find the measures of the specified angles.



$m\angle EAB =$ _____	$m\angle EFJ =$ _____	$m\angle OPK =$ _____	$m\angle GCD =$ _____
$m\angle ABF =$ _____	$m\angle NOJ =$ _____	$m\angle JKG =$ _____	$m\angle LHR =$ _____
$m\angle FEI =$ _____	$m\angle JOP =$ _____	$m\angle BCG =$ _____	$m\angle KLQ =$ _____

3. (10 points) Create a flow chart to show how you found the  $m\angle NOJ$ .

4. (10 points) Solve the following systems of equations. Justify with clear and complete work.

$$x + y = 8$$

$$2x + 5y = 3$$